Introduction of the digitization software GDgraph Workshop on EXFOR Compilation (Vienna)

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China Nuclear Data Center China Institute of Atomic Energy (CIAE)

Aug. 29, 2013



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Summary

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 Evaluators & Experimenters always desire experimental data sets (heavy ions)



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 Data are often published on figures without numerical values





The quality of figure isn't good enough



图 3 双微分能谱图 。是实验点。曲线是理论计算结果

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Oifficult to identify the point in figure



图 2 不同出射元素的对全能谱积分的角分布. 图中标 Li—Na 的曲线是对 Li—Na 求和,对全能谱积分的角分布.

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Researchers should not waste time to digitize numerical data on publications



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Short history

Requirements from evaluation & measurement



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Short history

- Requirements from evaluation & measurement
- Start to develope a software for digitization since 1997
- GDgraph developes using from VC++ to Perl
 Version 5.0 Windows and in Objects 2.5
- Version-5.0, Windows and in Chinese & English



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GDgraph-1.0

- 2001 released, VC++
- Mold of GDgraph fits the basic requirements
- BMP file is readed only
- One set data are digitized only
- Can't change interface size & move point
- No xy-error, can't randomly delete point





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GDgraph-2.0

- 2006 released, Perl
- Graphics file (jpg, png, bmp...)
- Figure zoom in/out
- Rotate figure
- Figure size auto fit to window
- Revert figure size



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GDgraph-2.0

Add/Del data groups

- Max. 3 data groups
- Blue, red & green represent
- Add/move point by mouse
- Output data save as file/clipboard
- Digitize y error with mouse
- Set fix value of y unc.



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GDgraph-3.0

- Released at 2011
- Copy figure from clipboard
- Select thin/thick line
- Set rotated angle
- O Partially zoom-in
- Coordinate & fig. zoom in/out together
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GDgraph-4.4

- Update at 2012, Perl
- Allow to digitize x error & use keyboard to move errorbars
- Add Project & Remarks function
- Add Setting function
- Allow to move partially zoom-in window



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- Operation Point size
- O Zoom-in window size
- Multiple of zoom in
- Length of errorbar cross line
- Grid line & space



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GDgraph-5.0

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- ② Chn→Chn&Eng
- GUI: Dialogue Single Doc. Inter.
- Update Project func.
- X,Y error in symmetry & asymmetry
 Set X X error in abs

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- Add output data format
- Use "Pageup" & "Pagedown" to select Pre. or Next point



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- Add shortcut keys to digitize error
- Add "Import data" function



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GDgraph-5.0 Import Text Data Modify magnifying :\Documents and Settings\Guochang\桌面\Figure_2_1 File Name glass window Imported data file information Add shortcut keys to digitize error Add "Import data" Next > Cancel function

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GDgraph-5.0

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Introduction

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Summary



- Requirements from evaluation and measurement for developing digitization software
- GDgraph: a software is developed for digitization since 1997
- Present version is fit for digitization requirements
- Some bugs and functions should be developed in future such as symbols, automatic searching axis, ...
- Adopt good characters and functions from other softwares

Thank you for your attention!

Welcom to China!

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